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EXAMINER

PATEL, GAUTAM

ART UNIT PAPER NUMBER

2655

DATE MAILED: 11/24/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/821,742

Applicant(s)

TOGASHI, MITSUHIRO

Examiner

Gautam R. Patel

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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**DETAILED ACTION**

1. Claims 1-4 are pending for the examination.

***Election/Restriction***

2. Claims 2 and 4 are withdrawn from further consideration by the examiner, 37 C.F.R. § 1.142(b) as being drawn to figs. Other than 8-9. Election was made with traverse of claims 1 and 3.

Applicant's election with traverse of second embodiment in Paper No. 6 is acknowledged. The traversal is on the ground(s) that "the second embodiment depicted in FIGS. 8-9 includes the divided electrode pattern corresponding to the first embodiment combined with another divided electrode pattern obtained by rotating by an angle of 90 degrees around an optical axis the divided electrode pattern corresponding to comparative embodiment."

Accordingly, Applicant respectively submits that claim 1 is generic."

Claim 1 in its present form may be considered generic. However the limitations in claim 2 and 4 do not correspond to limitations in claim 1 and 3, therefore claims 2 and 4 are removed further form examination.

The requirement is still deemed proper and is therefore made **FINAL**.

Applicants are urged to cancel non-elected claims.

***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. § 119(a)-(d), which papers have been placed of record in the file.

**NOTES & REMARKS**

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. For example claim 3, line 3 has "further comprise". May be this should read "further comprises". Applicant's cooperation is requested in correcting any errors of which Applicant may become aware in the specification.

#### Drawings/Objection

5. The drawings are objected for following reasons:  
The drawings are objected to under 37 C.F.R. § 1.83(a), 37 CFR § 1.84p, and 1.84 (o). The drawings must show *every feature* of the invention specified in the claims.
  1. Figs. 4a, 4b and 5 does not define what X-axis and Y-axis represents in all these figures. Applicant is required to provide suitable meaningful legends under 37 CFR ' 1.83 (a) and 1.84 (o).
  2. The drawings are objected to under 37 C.F.R. § 1.83(a). The drawings must show *every feature* of the invention specified in the claims. Therefore, the "position maximizing an aberration and position minimizing an aberration" on the correction unit must be shown or the feature canceled from the claim. **No new matter should be entered.**  
Applicant is required to submit a proposed drawing correction in response to this Office Action. Any proposal by the applicant for amendment of the drawings to cure defects must consist of **two** parts:
    3. A separate letter to the Draftsman in accordance with MPEP § 608.02 (r); and,
    4. A print or pen-and-ink sketch showing changes in **red ink** in accordance with MPEP § 608.02 (v).

IMPORTANT NOTE: The filing of new formal drawings to correct the noted defect may be deferred until the application is allowed by the examiner, but the print or pen-and-ink

sketch with proposed corrections shown in *red ink* is required in response to this Office Action, and may not be deferred.

### Content of Specification

6. The disclosure is objected for following reasons.

1. This application does not contain an Abstract of the Disclosure as required by 37 C.F.R. § 1.72(b). An Abstract on a separate sheet is required.

2. Applicant is reminded of the *proper language* and format of an Abstract of the Disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of **50 to 150 words**. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said", should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," *etc.*

In the present application abstract is **too long**.

3. The title of the invention is neither precise nor descriptive. A new title is required which should include, using twenty words or fewer, claimed features that differentiate the invention from the Prior Art. It is recommended that the title should reflect the gist of or the improvement of the present invention.

Corrections are required.

***Claim Objections***

7. Claims 1 and 3 are objected for following reasons:

The concept of "arranging first electrode on one area of correction unit at a position maximizing an aberration" is not clearly defined in the specification. Detailed specification on page 12, lines 8-17 simply states that "independent electrodes 16d and 16e are placed at positions, at which the coma-aberration is maximized and minimized.". the specification does not disclose at all how first electrode [whichever that one is] is placed at a position maximizing an aberration. And more importantly how that position is defined and found on the disk to be a position for maximum aberration.

Also same problem is with so called second electrode and position which is defined as to be position of minimum aberration.

Same problem exist with respect to a third and a fourth electrode as claimed in claim 3 but not defined or explained in the specification at all.

Corrections and/or explanations are required.

***Claim Rejections - 35 U.S.C. § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1, 3 are rejected under 35 U.S.C. § 102(e) as being anticipated by Ogasawara, US. patent 6,141,304 (hereafter Ogasawara).

As to claim 1, Ogasawara discloses the invention as claimed [see Figs. 1-15, especially 1, 6, 8, 13B and 15] including a light emitting unit, an object lens, and correction unit, comprising:

a light emitting unit [fig. 1, unit 1] used for emitting light, an object lens [fig. 1, unit 5] used for collimating the light from the light emitting unit to form a beam of light and focusing the beam of light to a recording surface [fig. 1, surface of unit 6] of an optical disc [fig. 1, unit 6], and a correction unit [fig. 1, unit 3] used for correcting an aberration caused by a tilt of an optical axis of the beam of light relative to the recording surface of the optical disc [col. 5, lines 1-23], wherein

said correction unit has a light transmitting surface capable of allowing a transmission of the light from the light emitting unit, with a plurality of electrodes [fig. 2, unit 302a and 302b and also fig. 13A-13B, unit 302d] [col. 5, lines 26-33] arranged on a plurality of divided areas [fig. 13B] of the light transmitting surface, said correction unit correcting the aberration by applying voltages, corresponding to said tilt of the optical axis of the beam of light relative to the recording surface of the optical disc, to said electrodes and changing phases of the beam of light passing through the divided areas of the light transmitting surface [col. 5, lines 42-55] and col. 7, lines 38-58], and said electrodes consisting of:

a first electrode arranged on at least one area of the light transmitting surface of said correction unit at a position maximizing an aberration, caused by a radial tilt of the optical axis of the beam of light relative to the recording surface of the optical disc in a radial direction of the disc [col. 7, line 38 to col. 8, line 18 and col. 8, lines 23-44]; and

a second electrode arranged on at least one area of the light transmitting surface of said correction unit at a position minimizing the aberration, caused by the radial tilt of the optical axis of the beam of light relative to the recording surface of the optical disc [col. 7, line 38 to col. 8, line 18 and col. 8, lines 23-44].

NOTE: When value of wavefront aberration is zero [col. 8, lines 12-18], one gets minimum aberration. When value is in +75 nm or -75 nm one gets maximum aberration.

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Thus both electrodes are covering the area for maximum and minimum aberration area. Best image point is where aberration is minimum.

***Claim Rejections - 35 U.S.C. § 103***

9. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ogasawara as applied to claim 1 above.

Ogasawara discloses all of the above elements, including first and second electrodes and places where aberration is maximum and minimum [see fig. 6]. Ogasawara also clearly discloses a third, a fourth, a fifth and a sixth electrode [see fig. 13B and fig. 15 and col. 14, lines 26-34 and col. 17, lines 23-34]. Ogasawara also clearly discloses that his system can be set up to minimize the aberration caused by the tangential tilt of the optical disk and electrodes [three and four] can be also arranged accordingly [col. 10, lines 6-26]. Ogasawara does not specifically disclose the specific arrangement and alignment of the fifth and sixth electrode to the extent claimed.

However, it is well known in the art that electrodes are arranged according to system needs [e.g. see figs. 5, 10, 13 and 15; Ogasawara]. Also Ogasawara clearly teaches that electrodes can also be arranged such that effect of the wavefront aberration ascribable to the tilt angle does not present a problem in reproduction. [col. 10, lines 24-33].

One of ordinary skill in the art at the time of invention would have realized that it is necessary to arrange the electrodes such that aberration is minimized. Therefore, it would have been obvious to have arranged and aligned fifth and sixth electrodes with



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third and fourth electrodes in a position close to edge of the light transmitting surface outside of the third and fourth electrodes respectively in the system of Ogasawara as taught by Ogasawara because one would be motivated to reduce aberration in the system that is caused by radial and tangential tilt. Also rearranging parts to obtain optimum results is not a patentable limitation as such.

***Other prior art cited***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Stengl et al. (US. patent 5,436,460) Ion-optical imaging system.
2. Furukawa et al. (US. patent 6,411,576) Aberration compensation device ..
3. Iwasaki (US. patent 6,643,244) Liquid-crystal panel optical pickup ..
4. Wada et al. (US. patent 6,532,202) Optical element ...
5. Shibaguchi (US. patent 5,140,454) Electro-optic device
6. Ogasawara et al. (US. patent 6,151,154) Optical pickup, aberration correction unit ...

***Contact information***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is (703) 308-7940. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2650) where this application or proceeding is assigned is (703) 872-9314.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To can be reached on (703) 305-4827.

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Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4700 or the group Customer Service section whose telephone number is (703) 306-0377.

A handwritten signature in black ink, appearing to read "Gautam R. Patel", with a long horizontal line extending from the end of the signature.

Gautam R. Patel  
Patent Examiner  
Group Art Unit 2655

November 19, 2003